

### Amendments to the Claims:

*This listing of claims will replace all prior versions, and listings, of claims in the application.*

1-11. (Cancelled).

12. (Currently Amended) Process for treating osteoarthritis-induced lameness caused by ~~osteoarthritis~~, in a non-human animal suffering from osteoarthritis and not suffering from fractures, comprising the administration, to the non-human animal, of an effective amount of a bisphosphonic acid derivative selected from the group consisting of:

- 1-hydroxyethylidenebisphosphonic acid and its sodium salts;
- 2-pyrid-2-ylethylidenebisphosphonic acid and its sodium salts;
- phenoxymethylenebisphosphonic acid and its salts;
- thiomorpholinomethylenebisphosphonic acid and its salts;
- 4-chlorophenylthiomethylenebisphosphonic acid and its salts;
- 1-hydroxy-2-(3-pyridyl)ethylidenebisphosphonic acid and its sodium salts;
- 1-hydroxy-2-(2-imidazolyl)ethyl-1,1-bisphosphonic acid and its salts; and
- 2-hydroxyethylidene-2-(3-pyridyl)-1,1-bisphosphonic acid and its sodium salts.

13. (Previously Presented) Process according to claim 12, for treating an animal belonging to the equidae family.

14. (Previously Presented) Process according to claim 12, for treating a horse.

15. (Previously Presented) Process according to claim 12, comprising the administration of 0.001 mg/kg to 100 mg/kg of body weight of the bisphosphonic acid derivative.

16. (Previously Presented) Process according to claim 12, for treating limps in horses, comprising the intravenous administration of 0.01 mg/kg/week to 1 mg/kg/week of tiludronic acid or one of its pharmaceutically acceptable salts.

17. (Previously Presented) Process according to claim 12, comprising the oral administration of the bisphosphonic acid derivative.

18. (Previously Presented) Process according to claim 12, comprising the parenteral administration of the bisphosphonic acid derivative.

19. (Previously Presented) Process according to claim 12, comprising the administration of the bisphosphonic acid derivative in the form of an implant.

20. (Previously Presented) Process according to claim 12, in which the bisphosphonic acid derivative is 4-chlorophenylthiomethylenebisphosphonic acid.

21. (Currently Amended) Process for treating osteoarthritis-induced lameness ~~caused by osteoarthritis~~, in a horse suffering from osteoarthritis and not suffering from fractures, comprising the administration, to the horse, of an effective amount of 4-chlorophenylthiomethylene-bisphosphonic acid or its sodium salt.

22. (Currently Amended) Process for treating osteoarthritis-induced lameness ~~caused by osteoarthritis~~, in a non-human animal suffering from osteoarthritis and not suffering from fractures, comprising the administration, to the nonhuman animal, of an effective amount of a bisphosphonic acid derivative selected from the group consisting of:

- 1-hydroxyethylidenebisphosphonic acid and its sodium salts;
- 2-pyrid-2-ylethylidenebisphosphonic acid and its sodium salts;
- phenoxymethylenebisphosphonic acid and its salts;
- thiomorpholinomethylenebisphosphonic acid and its salts;

- 4-chlorophenylthiomethylenebisphosphonic acid and its salts;
  - 1-hydroxy-2-(3-pyridyl)ethylidenebisphosphonic acid and its sodium salts;
  - 1-hydroxy-2-(2-imidazolyl)ethyl-1,1-bisphosphonic acid and its salts; and
  - 2-hydroxyethylidene-2-(3-pyridyl)-1,1-bisphosphonic acid and its sodium salts;
- without any increase in bone density being detectable by radiological examination following treatment.